AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-9. (Canceled)

10. (Previously Presented) A method for running an object-oriented application on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

providing an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented application on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

determining if a particular object-oriented method to be invoked during runtime execution is not present in executable program memory in the computer hardware; and

loading the particular object-oriented method into the executable program memory determined to not be present in the executable program memory prior to its runtime execution.

11. (Previously Presented) The method of claim 10, which further comprises:

the particular object-oriented method being not present in the executable program memory when the object-oriented program begins execution.

12. (Previously Presented) The method of claim 10, which further comprises:

the particular object-oriented method being specific to the computer platform.

13. (Previously Presented) The method of claim 10, which further comprises:

the particular object-oriented method being specific to the computer hardware.

14. (Previously Presented) The method of claim 10, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware.

15. (Previously Presented) The method of claim 10, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware and the program logic code being responsive to the particular object-oriented method.

16. (Currently Amended) A computer program product embodied on a computer storage medium, for running an object-oriented application on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, the program product performing the steps of:

providing an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented application on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

determining if a particular object-oriented method to be invoked during runtime execution is not present in executable program memory in the computer hardware; and

loading the particular object-oriented method into the executable program memory determined to not be present in the executable program memory prior to its runtime execution.

17. (Previously Presented) The computer program product of claim 16, which further comprises:

the particular object-oriented method being not present in the executable program memory when the object-oriented program begins execution.

18. (Previously Presented) The computer program product of claim 16, which further comprises:

the particular object-oriented method being specific to the computer platform.

19. (Previously Presented) The computer program product of claim 16, which further comprises:

the particular object-oriented method being specific to the computer hardware.

20. (Previously Presented) The computer program product of claim 16, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware.

21. (Previously Presented) The computer program product of claim 16, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware and the program logic code being responsive to the particular object-oriented method.

22. (Currently Amended) A computer program product embodied on a computer storage medium, for running an object-oriented application on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, the program product comprising:

program code to provide an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented application on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

program code to determine if a particular object-oriented method to be invoked during runtime execution is not present in executable program memory in the computer hardware; and

program code to load the particular object-oriented method into the executable program memory determined to not be present in the executable program memory prior to its runtime execution.

23. (Previously Presented) The computer program product of claim 22, which further comprises:

the particular object-oriented method being not present in the executable program memory when the object-oriented program begins execution.

24. (Previously Presented) The computer program product of claim 22, which further comprises:

the particular object-oriented method being specific to the computer platform.

25. (Previously Presented) The computer program product of claim 22, which further comprises:

the particular object-oriented method being specific to the computer hardware.

26. (Previously Presented) The computer program product of claim 22, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware.

27. (Previously Presented) The computer program product of claim 22, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware and the program logic code being responsive to the particular object-oriented method.

28. (Previously Presented) A computer platform for running an object-oriented application, including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

a processor; and

a memory coupled to the processor, containing code which implements an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented application on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

the memory programmed to determine if a particular object-oriented method to be invoked during runtime execution is not present in executable program memory in the computer hardware; and

the memory programmed to load the particular object-oriented method into the executable program memory determined to not be present in the executable program memory prior to its runtime execution.

29. (Previously Presented) The computer platform of claim 28, which further comprises:

the particular object-oriented method being not present in the executable program memory when the object-oriented program begins execution.

30. (Previously Presented) The computer platform of claim 28 which further comprises:

the particular object-oriented method being specific to the computer platform.

31. (Previously Presented) The computer platform of claim 28, which further comprises:

the particular object-oriented method being specific to the computer hardware.

32. (Previously Presented) The computer platform of claim 28, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware.

33. (Previously Presented) The computer platform of claim 28, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware and the program logic code being responsive to the particular object-oriented method.

34. (Previously Presented) A method for running an object-oriented program on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

loading code that implements an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer

platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

the object-oriented program including a call to a particular object-oriented method; and

loading code into the executable program memory that implements the particular object-oriented method, if it is not yet loaded prior to its runtime execution.

35. (Previously Presented) The method of claim 34, which further comprises:

the particular object-oriented method being not present in the executable program memory when the object-oriented program begins execution.

36. (Previously Presented) The method of claim 34, which further comprises:

the particular object-oriented method being specific to the computer platform.

37. (Previously Presented) The method of claim 34, which further comprises:

the particular object-oriented method being specific to the computer hardware.

38. (Previously Presented) The method of claim 34, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware.

39. (Previously Presented) The method of claim 34, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware and the program logic code being responsive to the particular object-oriented method.

40. (Previously Presented) A method for an object-oriented program running on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

using an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

including a call in the object-oriented program, to a particular object-oriented method not present in executable program memory;

the particular object-oriented method being loaded into the executable program memory, if it is determined to not be present in the executable program memory prior to its runtime execution.

41. (Previously Presented) The method of claim 40, which further comprises:

the particular object-oriented method being not present in the executable program memory when the object-oriented program begins execution.

42. (Previously Presented) The method of claim 40, which further comprises:

the particular object-oriented method being specific to the computer platform.

43. (Previously Presented) The method of claim 40, which further comprises:

the particular object-oriented method being specific to the computer hardware.

44. (Previously Presented) The method of claim 40, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware.

45. (Previously Presented) The method of claim 40, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware and the program logic code being responsive to the particular object-oriented method.

46. (Currently Amended) A computer program product embodied on a computer storage medium, for running an object-oriented program on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

program code for loading code that implements an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

the object-oriented program including a call to a particular object-oriented method not present in executable program memory; and

program code for loading code into the executable program memory that implements the particular object-oriented method, if it is not yet loaded prior to its runtime execution.

47. (Previously Presented) The computer program product of claim 46, which further comprises:

the particular object-oriented method being not present in the executable program memory when the object-oriented program begins execution.

48. (Previously Presented) The computer program product of claim 46, which further comprises:

the particular object-oriented method being specific to the computer platform.

49. (Previously Presented) The computer program product of claim 46, which further comprises:

the particular object-oriented method being specific to the computer hardware.

50. (Previously Presented) The computer program product of claim 46, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware.

51. (Previously Presented) The computer program product of claim 46, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware and the program logic code being responsive to the particular object-oriented method.

52. (Currently Amended) An object-oriented computer program product embodied on a computer storage medium, to run on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

program code for using an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

program code for calling with the object-oriented program, a particular object-oriented method not present in executable program memory;

the particular object-oriented method being loaded into the executable program memory, if it is determined to not be present in the executable program memory prior to its runtime execution.

53. (Previously Presented) The computer program product of claim 52, which further comprises:

the particular object-oriented method being not present in the executable program memory when the object-oriented program begins execution.

54. (Previously Presented) The computer program product of claim 52, which further comprises:

the particular object-oriented method being specific to the computer platform.

55. (Previously Presented) The computer program product of claim 52, which further comprises:

the particular object-oriented method being specific to the computer hardware.

56. (Previously Presented) The computer program product of claim 52, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware.

57. (Previously Presented) The computer program product of claim 52, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware and the program logic code being responsive to the particular object-oriented method.

58. (Previously Presented) A method for an object-oriented program running on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

invoking an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

including a call in the object-oriented program, to a particular object-oriented method not present in executable program memory;

the particular object-oriented method being loaded into the executable program memory, if it is determined to not be present in the executable program memory prior to its runtime execution.

59. (Previously Presented) The method of claim 58, which further comprises:

the particular object-oriented method being not present in the executable program memory when the object-oriented program begins execution.

60. (Previously Presented) The method of claim 58, which further comprises:

the particular object-oriented method being specific to the computer platform.

61. (Previously Presented) The method of claim 58, which further comprises:

the particular object-oriented method being specific to the computer hardware.

62. (Previously Presented) The method of claim 58, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware.

63. (Previously Presented) The method of claim 58, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware and the program logic code being responsive to the particular object-oriented method.

64. (Previously Presented) A method for an object-oriented program running on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

invoking an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

including a call in the object-oriented program, to a particular object-oriented method not present in executable program memory; and

causing the particular object-oriented method to be loaded into the executable program memory, if it is determined to not be present in the executable program memory prior to its runtime execution.

65. (Previously Presented) The method of claim 64, which further comprises:

the particular object-oriented method being not present in the executable program memory when the object-oriented program begins execution.

66. (Previously Presented) The method of claim 64, which further comprises:

the particular object-oriented method being specific to the computer platform.

67. (Previously Presented) The method of claim 64, which further comprises:

the particular object-oriented method being specific to the computer hardware.

68. (Previously Presented) The method of claim 64, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware.

69. (Previously Presented) The method of claim 64, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware and the program logic code being responsive to the particular object-oriented method.

70. (Currently Amended) An object-oriented computer program product embodied on a computer storage medium, to run on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, the computer program product comprising:

program code for invoking an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

program code for invoking a particular object-oriented method not present in executable program memory; and

program code for causing the particular object-oriented method to be loaded into the executable program memory, if it is determined to not be present in the executable program memory prior to its runtime execution.

71. (Previously Presented) The computer program product of claim 70, which further comprises:

the particular object-oriented method being not present in the executable program memory when the object-oriented program begins execution.

72. (Previously Presented) The computer program product of claim 70, which further comprises:

the particular object-oriented method being specific to the computer platform.

73. (Previously Presented) The computer program product of claim 70, which further comprises:

the particular object-oriented method being specific to the computer hardware.

74. (Previously Presented) The computer program product of claim 70, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware.

75. (Previously Presented) The computer program product of claim 70, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware and the program logic code being responsive to the particular object-oriented method.

76. (Previously Presented) A method for an object-oriented program running on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

invoking an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

including a call in the object-oriented program, to a particular object-oriented method not present in executable program memory, the method programmed to obtain a particular one of the native operating system services; and

causing the loading into the executable program memory of the particular object-oriented method, if the particular method is determined to not be present, wherein the particular object-oriented method invokes code specific to a particular one of the plurality of computer platforms.

77. (Previously Presented) The method of claim 76, which further comprises:

the particular object-oriented method being not present in the executable program memory when the object-oriented program begins execution.

78. (Previously Presented) The method of claim 76, which further comprises:

the particular object-oriented method being specific to the computer platform.

79. (Previously Presented) The method of claim 76, which further comprises:

the particular object-oriented method being specific to the computer hardware.

80. (Previously Presented) The method of claim 76, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware.

81. (Previously Presented) The method of claim 76, which further comprises:

the particular object-oriented method being specific to the operating system executing on the computer hardware and the program logic code being responsive to the particular object-oriented method.

82. (Currently Amended) An object-oriented computer program product embodied on a computer storage medium, to run on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, the computer program product comprising:

program code for invoking an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

program code for invoking a particular object-oriented method not present in executable program memory, the method programmed to obtain a particular one of the native operating system services; and

program code for causing the loading into the executable program memory of the particular object-oriented method, if the particular method is determined to not be present, wherein the particular object-oriented method invokes code specific to a particular one of the plurality of computer platforms.

83. (Previously Presented) A method for running an object-oriented program on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code

specific to the operating system and compiled for use on the computer hardware, comprising:

loading code that implements an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

the object-oriented program including a call to a particular object-oriented method not present in executable program memory, the method programmed to obtain a particular one of the native operating system services; and

loading into the executable program memory the particular object-oriented method, if the particular method is determined to not be present, wherein the particular object-oriented method invokes code specific to a particular one of the plurality of computer platforms.

84. (Currently Amended) A computer program product <u>embodied on a computer storage medium,</u> for running an object-oriented program on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, the computer program product comprising:

program code for loading code that implements an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

the object-oriented program including a call to a particular object-oriented method not present in executable program memory, the method programmed to obtain a particular one of the native operating system services; and

program code for loading into the executable program memory the particular object-oriented method, if the particular method is determined to not be present, wherein the particular object-oriented method invokes code specific to a particular one of the plurality of computer platforms.

85. (Previously Presented) A method for an object-oriented program running on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

invoking an object-oriented library, including object-oriented classes each containing one or more methods, on the computer platform, the library executable on a plurality of computer platforms including different combinations of computer

hardware and operating systems, the library responsive to the execution of the same object-oriented program on the plurality of computer platforms which instantiates objects from the classes and invokes the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

including a call in the object-oriented program, to a particular object-oriented method not present in executable program memory;

the particular object-oriented method being loaded into the executable program memory, if it is determined to not be present in the executable program memory prior to its runtime execution.

86. (Previously Presented) A method for an object-oriented program running on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

invoking an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one

computer platform to provide native operating system services from the one computer platform;

including a call in the object-oriented program, to a particular object-oriented method not present in executable program memory;

the particular object-oriented method being copied into the executable program memory, if it is determined to not be present in the executable program memory prior to its runtime execution.

87. (Previously Presented) A method for an object-oriented program running on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

invoking an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

including a call in the object-oriented program, to a particular object-oriented method not present in executable program memory;

the particular object-oriented method being transferred into the executable program memory, if it is determined to not be present in the executable program memory prior to its runtime execution.

88. (Previously Presented) A method for an object-oriented program running on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

invoking an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

including a call in the object-oriented program, to a particular object-oriented method not present in executable program memory;

the particular object-oriented method being sent to the executable program memory, if it is determined to not be present in the executable program memory prior to its runtime execution.

89. (Previously Presented) A method for an object-oriented program running on a computer platform including computer hardware and an operating

system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

invoking an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

including a call in the object-oriented program, to a particular object-oriented method not present in executable program memory;

the particular object-oriented method being placed into the executable program memory, if it is determined to not be present in the executable program memory prior to its runtime execution.

90. (Previously Presented) A method for running an object-oriented program on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

loading an object-oriented library, including object-oriented classes each containing one or more methods, on the computer platform, the library executable on a plurality of computer platforms including different combinations of computer

hardware and operating systems, the library responsive to the execution of the same object-oriented program on the plurality of computer platforms which instantiates objects from the classes and invokes the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

the object-oriented program including a call to a particular object-oriented method not present in executable program memory, the method programmed to obtain a particular one of the native operating system services; and

loading into the executable program memory the particular object-oriented method, if the particular method is determined to not be present, wherein the particular object-oriented method invokes code specific to a particular one of the plurality of computer platforms.

91. (Previously Presented) A method for running an object-oriented program on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

copying code into executable program memory that implements an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

the object-oriented program including a call to a particular object-oriented method not present in the executable program memory, the method programmed to obtain a particular one of the native operating system services; and

copying into the executable program memory the particular object-oriented method, if the particular method is determined to not be present, wherein the particular object-oriented method invokes code specific to a particular one of the plurality of computer platforms.

92. (Previously Presented) A method for running an object-oriented program on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

transferring code into executable program memory that implements an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one

computer platform to provide native operating system services from the one computer platform;

the object-oriented program including a call to a particular object-oriented method not present in the executable program memory, the method programmed to obtain a particular one of the native operating system services; and

transferring into the executable program memory the particular object-oriented method, if the particular method is determined to not be present, wherein the particular object-oriented method invokes code specific to a particular one of the plurality of computer platforms.

93. (Previously Presented) A method for running an object-oriented program on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

sending code to executable program memory that implements an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

the object-oriented program including a call to a particular object-oriented method not present in the executable program memory, the method programmed to obtain a particular one of the native operating system services; and

sending to the executable program memory the particular object-oriented method, if the particular method is determined to not be present, wherein the particular object-oriented method invokes code specific to a particular one of the plurality of computer platforms.

94. (Previously Presented) A method for running an object-oriented program on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

placing code into executable program memory that implements an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

the object-oriented program including a call to a particular object-oriented method not present in the executable program memory, the method programmed to obtain a particular one of the native operating system services; and

placing into the executable program memory the particular object-oriented method, if the particular method is determined to not be present, wherein the particular object-oriented method invokes code specific to a particular one of the plurality of computer platforms.

95. (Previously Presented) A method for running object-oriented software on a computer platform including computer hardware with executable program memory and an operating system executing on the computer hardware, the operating system compiled for use on the computer hardware, comprising:

running object-oriented software on a computer platform, the software instantiating objects from classes and invoking object-oriented methods that make requests for native operating system services from the computer platform;

invoking an object-oriented library on the computer platform, the invoking being in order to call for native operating system services, the library including object-oriented classes each containing one or more methods, the library available for a plurality of computer platforms including different combinations of computer hardware and operating systems, the library used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

activating a program logic code specific to the operating system, the activating being by the object-oriented library in response to the call for native operating system services;

the object-oriented software including a call to a particular object-oriented method not already present in the executable memory; and

causing the loading into the executable program memory of the particular object-oriented method, if it is determined to not have been present in the executable program memory prior to its runtime execution.

96. (Previously Presented) A method for running software on a computer platform including computer hardware with executable program memory and an operating system executing on the computer hardware, the operating system compiled for use on the computer hardware, comprising:

running object-oriented software on a computer platform, the software instantiating objects from classes and invoking object-oriented methods that make requests for native operating system services from the computer platform;

invoking an object-oriented library on the computer platform, the invoking being in order to call for native operating system services, the library including object-oriented classes each containing one or more methods, the library available for a plurality of computer platforms including different combinations of computer hardware and operating systems, the library used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

activating a program logic code specific to the operating system, the activating being by the object-oriented library in response to the call for native operating system services;

the object-oriented software including a call to a particular object-oriented method not already present in the executable memory, the method to be called by the object-oriented software to request a particular one of the native operating system services; and

causing the loading into the executable program memory of the particular object-oriented method, if it is determined to not have been present in the executable program memory prior to its runtime execution.

97. (Previously Presented) A method for running software on a computer platform including computer hardware with executable program

memory and an operating system executing on the computer hardware, the operating system compiled for use on the computer hardware, comprising:

running object-oriented software on a computer platform, the software instantiating objects from classes and invoking object-oriented methods that make requests for native operating system services from the computer platform;

invoking an object-oriented library on the computer platform, the invoking being in order to call for native operating system services, the library including object-oriented classes each containing one or more methods, the library available for a plurality of computer platforms including different combinations of computer hardware and operating systems, the library used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

attempting to invoke the operating system with the object-oriented library in response to the call for native operating system services, by invoking a particular object-oriented method not already present in the executable memory; and

causing the loading into the executable program memory of the particular object-oriented method, if it is determined to not have been present in the executable program memory prior to its runtime execution.

98. (Currently Amended) A computer program product embodied on a computer storage medium, for running object-oriented software on a computer platform including computer hardware with executable program memory and an operating system executing on the computer hardware, the operating system compiled for use on the computer hardware, the computer program product comprising:

program code for running object-oriented software on a computer platform, the software instantiating objects from classes and invoking object-oriented methods that make requests for native operating system services from the computer platform;

program code for invoking an object-oriented library on the computer platform, the invoking being in order to call for native operating system services, the library including object-oriented classes each containing one or more methods, the library available for a plurality of computer platforms including different combinations of computer hardware and operating systems, the library used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

a procedural program logic code specific to the operating system, being activated by the object-oriented library in response to the call for native operating system services;

program code for invoking a particular object-oriented method not already present in the executable memory; and

program code for causing the loading into the executable program memory of the particular object-oriented method, if it is determined to not have been present in the executable program memory prior to its runtime execution.

99. (Currently Amended) A computer program product <u>embodied on a computer storage medium,</u> for running software on a computer platform including computer hardware with executable program memory and an operating system executing on the computer hardware, the operating system compiled for use on the computer hardware, the computer program product comprising:

program code for running object-oriented software on a computer platform, the software instantiating objects from classes and invoking object-

oriented methods that make requests for native operating system services from the computer platform;

program code for invoking an object-oriented library on the computer platform, the invoking being in order to call for native operating system services, the library including object-oriented classes each containing one or more methods, the library available for a plurality of computer platforms including different combinations of computer hardware and operating systems, the library used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

a program logic code specific to the operating system, being activated by the object-oriented library in response to the call for native operating system services;

program code for invoking a particular object-oriented method not already present in the executable memory, the method being invoked by the object-oriented software to request a particular one of the native operating system services; and

program code for causing the loading into the executable program memory of the particular object-oriented method, if it is determined to not have been present in the executable program memory prior to its runtime execution.

100. (Currently Amended) A computer program product <u>embodied on a computer storage medium,</u> for running software on a computer platform including computer hardware with executable program memory and an operating system executing on the computer hardware, the operating system compiled for use on the computer hardware, the computer program product comprising:

program code for running object-oriented software on a computer platform, the software instantiating objects from classes and invoking object-

oriented methods that make requests for native operating system services from the computer platform;

program code for invoking an object-oriented library on the computer platform, the invoking being in order to call for native operating system services, the library including object-oriented classes each containing one or more methods, the library available for a plurality of computer platforms including different combinations of computer hardware and operating systems, the library used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

program code for attempting to invoke the operating system with the object-oriented library in response to the call for native operating system services, by invoking a particular object-oriented method not already present in the executable memory; and

program code for causing the loading into the executable program memory of the particular object-oriented method, if it is determined to not have been present in the executable program memory prior to its runtime execution.

101. (Previously Presented) A computer platform for running object-oriented software on a computer platform including computer hardware with executable program memory and an operating system executing on the computer hardware, the operating system compiled for use on the computer hardware, comprising:

a processor; and

a memory coupled to the processor, containing program code which implements object-oriented software on the computer platform, the software instantiating objects from classes and invoking object-oriented methods that make requests for native operating system services from the computer platform;

program code in the memory which implements an object-oriented library on the computer platform, the invoking being in order to call for native operating system services, the library including object-oriented classes each containing one or more methods, the library available for a plurality of computer platforms including different combinations of computer hardware and operating systems, the library used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

program logic code specific to the operating system in the memory, activated by the object-oriented library in response to the call for native operating system services;

program code in the memory to invoke a particular object-oriented method not already present in the executable memory; and

program code in the memory to cause the loading into the executable program memory of the particular object-oriented method, if it is determined to not have been present in the executable program memory prior to its runtime execution.

102. (Previously Presented) A computer platform for running object-oriented software on a computer platform including computer hardware with executable program memory and an operating system executing on the computer hardware, the operating system compiled for use on the computer hardware, comprising:

a processor; and

a memory coupled to the processor, containing program code which implements object-oriented software on the computer platform, the software

instantiating objects from classes and invoking object-oriented methods that make requests for native operating system services from the computer platform;

program code in the memory which implements an object-oriented library on the computer platform, the invoking being in order to call for native operating system services, the library including object-oriented classes each containing one or more methods, the library available for a plurality of computer platforms including different combinations of computer hardware and operating systems, the library used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

program logic code specific to the operating system in the memory, activated by the object-oriented library in response to the call for native operating system services;

program code in the memory to invoke a particular object-oriented method not already present in the executable memory, the method being invoked by the object-oriented software to request a particular one of the native operating system services; and

program code in the memory to cause the loading into the executable program memory of the particular object-oriented method, if it is determined to not have been present in the executable program memory prior to its runtime execution.

103. (Previously Presented) A computer platform for running object-oriented software on a computer platform including computer hardware with executable program memory and an operating system executing on the computer hardware, the operating system compiled for use on the computer hardware, comprising:

a processor; and

a memory coupled to the processor, containing program code which implements object-oriented software on a computer platform, the software instantiating objects from classes and invoking object-oriented methods that make requests for native operating system services from the computer platform;

program code in the memory which implements an object-oriented library on the computer platform, the invoking being in order to call for native operating system services, the library including object-oriented classes each containing one or more methods, the library available for a plurality of computer platforms including different combinations of computer hardware and operating systems, the library used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

program code in the memory to attempt invoking the operating system with the object-oriented library in response to the call for native operating system services, by invoking a particular object-oriented method not already present in the executable memory; and

program code in the memory to cause the loading into the executable program memory of the particular object-oriented method, if it is determined to not have been present in the executable program memory prior to its runtime execution.

104. (Previously Presented) A method for running an object-oriented program on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

providing an object-oriented interface specifying object-oriented classes each containing one or more methods on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform, which are requested by the object-oriented program;

determining if object-oriented methods to be invoked during runtime execution are not present in executable program memory in the computer hardware; and

loading the object-oriented methods into the executable program memory determined to not be present in the executable program memory prior to their runtime execution, where the loading occurs after the object-oriented program has begun executing.

105. (Previously Presented) A method for running an object-oriented program on a computer platform including computer hardware with executable program memory and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

running the object-oriented program on a computer platform, the program instantiating objects from classes and invoking object-oriented methods that make requests for native operating system services from the computer platform;

invoking with the object-oriented program, an object-oriented interface on the computer platform, the invoking being in order to call for native operating system services, the interface including object-oriented classes each containing one or more methods, the interface available for a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform, which are requested by the object-oriented program;

the object-oriented program attempting to invoke a particular object-oriented method not present in executable program memory, the method programmed to call the program logic code to obtain a particular one of the native operating system services; and

causing the loading into the executable program memory of the particular object-oriented method, if it is determined to not have been present in the executable program memory prior to the runtime execution of the program, where the loading occurs after the object-oriented program has begun executing.

106. (Previously Presented) A method for running an object-oriented program on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

loading an object-oriented library, including object-oriented classes each containing one or more methods, on the computer platform, the library executable on a plurality of computer platforms including different combinations of computer hardware and operating systems, the library responsive to the execution of the same object-oriented program on the plurality of computer platforms which instantiates objects from the classes and invokes the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented library implemented on the one computer platform to provide native operating system services from the one computer platform, which are requested by the object-oriented program;

the object-oriented program attempting to invoke a particular object-oriented method not present in executable program memory, the method programmed to call the program logic code to obtain a particular one of the native operating system services; and

loading into the executable program memory the particular object-oriented method, if the particular method is determined to not be present, wherein the particular object-oriented method invokes code specific to a particular one of the plurality of computer platforms, where the loading occurs after the object-oriented program has begun executing.

107. (Previously Presented) A method for running an object-oriented program on a computer platform including computer hardware with executable program memory and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

running the object-oriented program on a computer platform, the program instantiating objects from classes and invoking object-oriented methods that make requests for native operating system services from the computer platform;

invoking with the object-oriented program, an object-oriented interface on the computer platform, the invoking being in order to call for native operating system services, the interface including object-oriented classes each containing one or more methods, the interface available for a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform, which are requested by the object-oriented program;

the object-oriented program attempting to invoke a particular object-oriented method not present in executable program memory, the method programmed to call the program logic code specific to the hardware of the computer platform, to obtain a particular one of the native operating system services; and

causing the loading into the executable program memory of the particular object-oriented method, if it is determined to not have been present in the executable program memory prior to the runtime execution of the program, where the loading occurs after the object-oriented program has begun executing.

108. (Previously Presented) A method for running an object-oriented program on a computer platform including computer hardware and an operating

system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

loading an object-oriented library, including object-oriented classes each containing one or more methods, on the computer platform, the library executable on a plurality of computer platforms including different combinations of computer hardware and operating systems, the library responsive to the execution of the object-oriented program which instantiates objects from the classes and invokes the object-oriented methods, the library used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented library implemented on the one computer platform to provide native operating system services from the one computer platform, which are requested by the object-oriented program;

the object-oriented program attempting to invoke a particular object-oriented method not present in executable program memory, the method programmed to call the program logic code specific to the hardware of the computer platform to obtain a particular one of the native operating system services; and

loading into the executable program memory the particular object-oriented method, if the particular method is determined to not be present, wherein the particular object-oriented method invokes code specific to a particular one of the plurality of computer platforms, where the loading occurs after the object-oriented program has begun executing.

109. (Previously Presented) A method for running an object-oriented program on a computer platform including computer hardware with executable program memory and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

running the object-oriented program on a computer platform, the program instantiating objects from classes and invoking object-oriented methods that make requests for native operating system services from the computer platform;

invoking with the object-oriented program, an object-oriented interface on the computer platform, the invoking being in order to call for native operating system services, the interface including object-oriented classes each containing one or more methods, the interface available for a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform, which are requested by the object-oriented program;

the object-oriented program attempting to invoke an object-oriented method not present in executable program memory to obtain a particular one of the native operating system services, the method programmed to call the program logic code specific to a corresponding one of the plurality of computer platforms, to obtain the particular one of the native operating system services;

causing the identifying of a particular object-oriented method, which calls program logic code specific to the hardware of the platform to obtain the particular one of the native operating system services; and

causing the loading into the executable program memory of the particular object-oriented method, if it is determined to not have been present in the executable program memory prior to the runtime execution of the program, where the loading occurs after the object-oriented program has begun executing.

110. (Previously Presented) A method for running an object-oriented program on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

loading an object-oriented library, including object-oriented classes each containing one or more methods, on the computer platform, the library executable on a plurality of computer platforms including different combinations of computer hardware and operating systems, the library responsive to the execution of the object-oriented program which instantiates objects from the classes and invokes the object-oriented methods, the library used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented library implemented on the one computer platform to provide native operating system services from the one computer platform, which are requested by the object-oriented program;

the object-oriented program attempting to invoke an object-oriented method not present in executable program memory to obtain a particular one of

the native operating system services, the method programmed to call the program logic code specific to a corresponding on of the plurality of computer platforms, to obtain the particular one of the native operating system services;

causing the identifying of a particular object-oriented method, which calls program logic code specific to the hardware of the platform to obtain the particular one of the native operating system services; and

loading into the executable program memory the particular object-oriented method, if the particular method is determined to not be present, wherein the particular object-oriented method invokes code specific to a particular one of the plurality of computer platforms, where the loading occurs after the object-oriented program has begun executing.

111. (Previously Presented) A method for running an object-oriented program on a computer platform including computer hardware and an operating system executing on the computer hardware, including program logic code specific to the operating system and compiled for use on the computer hardware, comprising:

providing an object-oriented interface specifying object-oriented classes each containing one or more methods, on the computer platform, the interface implemented on a plurality of computer platforms including different combinations of computer hardware and operating systems, the interface used by the same object-oriented program on the plurality of computer platforms to instantiate objects from the classes and invoke the object-oriented methods;

the object-oriented interface including a designation as to which methods invoke program logic code to provide native operating system services from the computer platform;

the program logic code on any one of the plurality of computer platforms being responsive to the object-oriented interface implemented on the one computer platform to provide native operating system services from the one computer platform;

determining if a particular object-oriented method to be invoked during runtime execution is not present in executable program memory in the computer hardware; and

loading the particular object-oriented method into the executable program memory determined to not be present in the executable program memory prior to its runtime execution.

112. (Previously Presented) The method of claim 10, wherein the native operating system services are thread services.

113. (Previously Presented) The method of claim 10, wherein the native operating system services are task services.

114. (Previously Presented) The method of claim 10, wherein the native operating system services are virtual memory services.

115. (Previously Presented) The method of claim 10, wherein the native operating system services are inter-process communication (IPC) services.

116. (Previously Presented) The method of claim 10, wherein the native operating system services are synchronization services.

117. (Previously Presented) The method of claim 10, wherein the native operating system services are scheduling services.

118. (Previously Presented) The method of claim 10, wherein the native operating system services are fault services.

119. (Previously Presented) The method of claim 10, wherein the native operating system services are processor and processor set services.

120. (Previously Presented) The method of claim 10, wherein the native operating system services are port services.

121. (Previously Presented) The method of claim 10, wherein the native operating system services are security services.

122. (Previously Presented) The method of claim 10, wherein the native operating system services are file system services.

123. (Previously Presented) The method of claim 10, wherein the native operating system services are graphical user interface (GUI) services.